

Claims

1. A mounting plate (10) for electronic components (12), having coolant lines (16, 18) integrated in a plate body (14) for a cooling fluid to flow through, wherein a fastening arrangement for mounting electronic components to be cooled is arranged on the plate body (14),

characterized in that

the fastening arrangement has at least one first groove (20), which is embodied to be C-shaped in cross section and extends in a straight line in the extension direction (A) of the mounting plate (10), into which at least one screw nut for forming a screw connection with an electronic component (12) can be inserted in a manner fixed against relative rotation.

2. The mounting plate in accordance with claim 1, characterized in that

the fastening arrangement has at least one second groove (22), which is designed identically to the first groove (20) and extends parallel with the first groove (20), whose distance (B) from the first groove (20) is substantially determined by the length of extension (B) perpendicularly in respect to the first and second grooves (20, 22) of the electronic component (12) to be mounted.

3. The mounting plate in accordance with claim 2, characterized in that

the fastening arrangement has at least one further groove (24), which is embodied identically to the first

groove (20) and second groove (22) and extends parallel with the second groove (22) and which extends at the side (26) of the second groove facing away from the electronic component to be mounted at a distance (C) from the latter which is less than the distance (B) between the first groove (20) and the second groove (22).

4. The mounting plate in accordance with one of claims 1 to 3,

characterized in that

electronic components (12) to be mounted, which have screw holes whose distance from each other corresponds to the distance (B) of the second groove (22) from the first groove (20), or that of the still further groove (24) from the second groove (22), can be directly fastened by means of screws (28) in the screw nuts inserted into the grooves (20, 22, 24).

5. The mounting plate in accordance with one of claims 1 to 4,

characterized in that

electronic components (12) to be mounted have screw holes, whose distance from each other is less than the distance (B) of the second groove (22) from the first groove (20), or less than the distance of the still further groove (24) from the first groove (20), can be clampingly fixed in place at least on one side by means of an angle bracket (30), by means of at least one screw (32) engaging the angle bracket can be screwed into the screw nut introduced into the respective groove (22).

6. The mounting plate in accordance with claim 5,
characterized in that

the angle bracket (30) has a level base plate (34) for
placement against the mounting plate (10) and a clamping area
(36) angled off in respect to it for the clamping fixation of
the electronic component (12) to be mounted.

7. The mounting plate in accordance with claim 6,
characterized in that

the angle bracket (30) has at least one elongated hole
(38) extending perpendicularly (D) in respect to the
extension direction (A) of the second groove (22) or of the
still further groove (24) for receiving the screw (32).

8. The mounting plate in accordance with one of claims
1 to 7,

characterized in that
the screw nut is a spring nut.

9. The mounting plate in accordance with one of claims
1 to 8,

characterized in that

the first groove (20), the second groove (22) and/or
the still further groove (24) are made of one piece with the
plate body.

File No.: PCT/EP2005/003693

Applicant: RITTAL GmbH & Co. KG

New Claims 1 to 8

(replace present claims 1 to 9)

1. A mounting plate (10) for electronic components (12), having coolant lines (16, 18) integrated in a plate body (14) for a cooling fluid to flow through, wherein a fastening arrangement for mounting electronic components to be cooled is arranged on the plate body (14),

wherein the fastening arrangement has at least one first groove (20), which is embodied to be C-shaped in cross section and extends in a straight line in the extension direction (A) of the mounting plate (10), into which at least one screw nut for forming a screw connection with an electronic component (12) can be inserted in a manner fixed against relative rotation, and

the fastening arrangement has at least one second groove (22), which is designed identically to the first groove (20) and extends parallel with the first groove (20), whose distance (B) from the first groove (20) is substantially determined by the length of extension (B) perpendicularly in respect to the first and second grooves (20, 22) of the electronic component (12) to be mounted,

characterized in that

the electronic components (12) to be mounted have screw holes, whose distance from each other is less than the distance (B) of the second groove (22) from the first groove (20), and the electronic components (12) to be mounted can be clampingly fixed in place at least on one side through an

angle bracket (30) by means of screws (32) in screw nuts introduced into the respective groove (22).

2. The mounting plate in accordance with claim 1, characterized in that

the fastening arrangement has at least one further groove (24), which is embodied identically to the first groove (20) and second groove (22) and extends parallel with the second groove (22) and which extends at the side (26) of the second groove facing away from the electronic component to be mounted at a distance (C) from the latter which is less than the distance (B) between the first groove (20) and the second groove (22).

3. The mounting plate in accordance with claim 2 or 3, characterized in that

the electronic components (12) to be mounted have screw holes whose distance from each other corresponds to the distance (B) of the second groove (22) from the first groove (20), or that of the still further groove (24) from the second groove (22), can be directly fastened by means of screws (28) in the screw nuts inserted into the grooves (20, 22, 24).

4. The mounting plate in accordance with claim 2 or 3, characterized in that

the electronic components (12) to be mounted have screw holes, whose distance from each other is less than the distance of the still further groove (24) from the first groove (20), and the electronic components (12) to be mounted can be clampingly fixed in place at least on one side through an angle bracket 30 by means of at least one screw (32) engaging the angle bracket screwed into the screw nut introduced into the respective groove (22).

5. The mounting plate in accordance with one of claims 1 to 4,

characterized in that

the angle bracket (30) has a level base plate (34) for placement against the mounting plate (10) and a clamping area (36) angled off in respect to it for the clamping fixation of the electronic component (12) to be mounted.

6. The mounting plate in accordance with claim 5, characterized in that

the angle bracket (30) has at least one elongated hole (38) extending perpendicularly (D) in respect to the extension direction (A) of the second groove (22) or of the still further groove (24) for receiving the screw (32).

7. The mounting plate in accordance with one of claims 1 to 6,

characterized in that

the screw nut is a spring nut.

8. The mounting plate in accordance with one of claims 1 to 7,

characterized in that

the first groove (20), the second groove (22) and/or the still further groove (24) are made of one piece with the plate body.